

Claims

- [c1] 1. A hand-held apparatus with a touch control device, comprising:
a display, comprising a backlight;
a metal slice, located on the surface of the hand-held apparatus, wherein when a user touches the metal slice, the metal slice generates an AC signal; and
a control circuit, coupled to the metal slice, used to convert the AC signal into a DC pulse signal so as to control the hand-held apparatus based on the DC pulse signal.
- [c2] 2. The hand-held apparatus with the touch control device of claim 1, wherein when the user touches the metal slice, the display is turned on.
- [c3] 3. The hand-held apparatus with the touch control device of claim 2, wherein when the user touches the metal slice again, the display is turned off.
- [c4] 4. The hand-held apparatus with the touch control device of claim 1, wherein when the user touches the metal slice, the backlight is turned on.
- [c5] 5. The hand-held apparatus with the touch control device of claim 4, wherein when the user touches the metal slice again, the backlight is turned off.

- [c6] 6. The hand-held apparatus with the touch control device of claim 1, wherein when the user touches the metal slice, the hand-held apparatus unlocks a keyboard.
- [c7] 7. The hand-held apparatus with the touch control device of claim 6, wherein when the user touches the metal slice again, the hand-held apparatus locks the keyboard.
- [c8] 8. The hand-held apparatus with the touch control device of claim 1, wherein the control circuit comprises:
an amplifier, coupled to the metal slice, used to amplify the AC signal and output an amplified AC signal;
a rectifier, coupled to the amplifier, used to rectify the amplified AC signal and output a rectified signal;
a filter, coupled to the rectifier, used to filter the rectified signal and output a DC pulse signal; and
a microprocessor, coupled to the filter, used to control the hand-held apparatus based on the DC pulse signal.
- [c9] 9. The hand-held apparatus with the touch control device of claim 1, wherein the hand-held apparatus is a mobile phone.
- [c10] 10. The hand-held apparatus with the touch control device of claim 1, wherein the hand-held apparatus is a PDA (Personal Digital Assistant).
- [c11] 11. The hand-held apparatus with the touch control device of claim 1, wherein the hand-held apparatus is a hand-held

computer.

- [c12] 12. A hand-held apparatus with a touch control device, comprising:
- a display, comprising a backlight;
 - a first metal slice, located on the surface of the hand-held apparatus and coupled to a positive voltage;
 - a second metal slice, located on the surface of the hand-held apparatus; and
 - a control circuit, coupled to the second metal slice, wherein when a user touches both the first metal slice and the second metal slice simultaneously, the control circuit controls the hand-held apparatus depending on the user's touch operation.
- [c13] 13. The hand-held apparatus with the touch control device of claim 12, wherein when the user touches both the first metal slice and the second metal slice simultaneously, the display is turned on.
- [c14] 14. The hand-held apparatus with the touch control device of claim 13, wherein when the user leaves both the first metal slice and the second metal slice, the display is turned off.
- [c15] 15. The hand-held apparatus with the touch control device of claim 12, wherein when the user touches both the first metal slice and the second metal slice simultaneously, the backlight is turned on.

- [c16] 16. The hand-held apparatus with the touch control device of claim 15, wherein when the user leaves both the first metal slice and the second metal slice, the backlight is turned off.
- [c17] 17. The hand-held apparatus with the touch control device of claim 12, wherein when the user touches both the first metal slice and the second metal slice simultaneously, the hand-held apparatus unlocks a keyboard.
- [c18] 18. The hand-held apparatus with the touch control device of claim 17, wherein when the user leaves both the first metal slice and the second metal slice, the hand-held apparatus locks the keyboard.
- [c19] 19. The hand-held apparatus with the touch control device of claim 12, wherein the control circuit comprises:
a resistor, having a first electrode and a second electrode, wherein the first electrode is coupled to the second metal slice, and the second electrode is grounded; and
a comparator, having a first input terminal, a second input terminal, and an output terminal, wherein the first input terminal is coupled to the second metal slice and the first electrode of the resistor, the second input terminal is coupled to a reference voltage, and the output terminal outputs a level signal so as to control the hand-held apparatus.
- [c20] 20. The hand-held apparatus with the touch control device of

claim 12, wherein the hand-held apparatus is a mobile phone.

[c21] 21. The hand-held apparatus with the touch control device of claim 12, wherein the hand-held apparatus is a PDA (Personal Digital Assistant).

[c22] 22. The hand-held apparatus with the touch control device of claim 12, wherein the hand-held apparatus is a hand-held computer.